

**WHAT IS CLAIMED IS:**

1. A method for screening a selective inhibitor of COX-2 for functionality in addition to COX-2 protein inhibition, comprising screening for at least one COX protein inhibition independent therapeutic activity.
2. The method of screening of Claim 1 which comprises screening the selective inhibitor of COX-2 for at least two of (a) activation of PPRE luciferase by at least 100%, (b) at least 50% decrease in level of or 50% downregulation of expression of Class I family of receptors tyrosine kinase, (c) at least 50% downregulation of expression of cyclin D1, (d) at least 50% downregulation of expression of HPV16 oncoproteins E6 and E7, (e) at least 50% increase in expression of PTEN, (f) at least 50% inhibition of tcf/lef/ $\beta$ -catenin-mediated promoter activation, and (g) at least 50% increase in level of Nrf-2.
3. A method for treating a patient having or at risk for cancer, Alzheimer's disease or atherosclerosis comprising administering a therapeutically effective amount of selective inhibitor of COX-2 that meets at least two of (a), (b), (c), (d), (e), (f) and (g).
4. A method for treating a patient having or at risk for cancer, Alzheimer's disease or atherosclerosis comprising administering a therapeutically effective amount of selective inhibitor of COX-2 or selective inhibitor of COX-1 that activates PPRE luciferase by at least 100%.
5. A method for treating a patient having or at risk for cancer, Alzheimer's disease or atherosclerosis, comprising administering a selective inhibitor of COX-2 in a dosage that not only inhibits COX-2 but also which provides a function selected for the group consisting of activating PPRE luciferase by at least 100%, decreasing level of or downregulating expression of Class I family of receptors tyrosine kinase by at least 50%, downregulating expression of cyclin D1 by at least 50%, downregulating expression of HPV16 oncoproteins E6 and E7 by at least 50%, increasing expression of PTEN by at least 50%, inhibiting tcf/lef/ $\beta$ -catenin-mediated promoter activation by at least 50% and inducing Nrf-2 by at least 50%.